

WHAT IS CLAIMED IS:

- 1 1. A method for treating incontinence, the method comprising:
2 aligning a probe body with a collagenous pelvic tissue;
3 heating a treatment volume of at least 100 cubic millimeters of the collagenous
4 tissue using the aligned probe body.
- 1 2. The method of claim 1, wherein the treatment volume is separated
2 from a urethra by at least about 1 cm.
- 1 3. The method of claim 2, wherein the treatment volume is offset laterally
2 from the urethra to a right side or left side.
- 1 4. The method of claim 2, wherein the treatment volume comprises at
2 least 300 cubic millimeters of collagenous tissue, wherein the heating is performed so that the
3 treatment volume is heated to a temperature of at least 70°C for a time of at least 30 seconds,
4 wherein the treatment volume is offset laterally from the urethra to a right side of a patient,
5 and further comprising heating another treatment volume offset laterally from the urethra to a
6 left side of the patient, the other treatment volume comprising at least 300 cubic millimeters
7 of collagenous tissue and heated to at least 70°C for at least 30 seconds.
- 1 5. The method of claim 1, wherein the treatment volume is heated to at
2 least about 65°C for at least about 100 seconds.
- 1 6. The method of claim 1, wherein the treatment volume is heated to at
2 least about 75°C for at least about 10 seconds.
- 1 7. The method of claim 1, further comprising applying a dwell time after
2 a desired heating temperature is achieved so as to increase treatment tissue volume.
- 1 8. The method of claim 1, wherein the treatment volume has a length
2 orientation extending along a urethra, a depth orientation extending between the collagenous
3 tissue and the probe body, and a width that is greater than the length of the treatment volume.
- 1 9. The method of claim 1, wherein the treatment volume has a length
2 orientation extending along a urethra, a depth orientation extending between the collagenous
3 tissue and the probe body, and a width that is less than the length of the treatment volume.

1 10. The method of claim 1, further comprising registering a position of the
2 treatment volume along an axis of the urethra with reference to a guide body disposed within
3 the urethra.

1 11. The method of claim 1, further comprising registering a position of the
2 treatment volume with reference to bone.

1 12. The method of claim 1, wherein the probe is aligned so that an
2 intermediate tissue is disposed between the probe body and the treatment volume.

1 13. The method of claim 12, wherein the treatment volume comprises
2 tissue separated from the aligned probe body by a distance within a range of about 2 to 8 mm.

1 14. The method of claim 12, wherein the treatment volume comprises
2 tissue separated from the aligned probe body by a distance within a range of about 2 to 4 mm.

1 15. The method of claim 12, wherein the heating is performed so as to
2 inhibit necrosis of the intermediate tissue.

1 16. The method of claim 15, wherein the heating is performed while
2 cooling the intermediate tissue.

1 17. The method of claim 15, wherein the heating is performed without
2 cooling of the intermediate tissue.

1 18. The method of claim 17, wherein the heating is performed by
2 advancing a plurality of tissue-penetrating electrodes from the probe body into the treatment
3 volume and applying electrical potential to the tissue-penetrating electrodes.

1 19. The method of claim 1, wherein the heating is performed by tip
2 movement of at least a pair of electrodes supported by the probe body.

1 20. The method of claim 19, wherein the treatment volume increases as the
2 tip movement speed decreases.

1 21. The method of claim 1, wherein the treatment volume comprises at
2 least 300 cubic millimeters of collagenous tissue.

1 22. The method of claim 1, wherein the treatment volume comprises
2 between about 100 cubic millimeters and about 800 cubic millimeters of collagenous tissue.

1 23. A system for treating incontinence of a patient having a collagenous
2 pelvic tissue, the system comprising:
3 a probe body alignable with the collagenous pelvic tissue so that an
4 intermediate tissue is disposed therebetween;
5 at least one energy delivery element supported by the probe body, the at least
6 one energy delivery element capable of heating, from the aligned probe body, a treatment
7 volume of at least 300 cubic millimeters of the collagenous tissue to a temperature of at least
8 70°C for a time of at least 30 seconds so that the collagenous pelvic tissue contributes to
9 continence.

1 24. The system of claim 23, further comprising at least one cooling
2 element supported by the probe body so as to provide cooling of the intermediate tissue while
3 heating the treatment volume.

1 25. The system of claim 24, wherein the at least one energy delivery
2 element comprises a plurality of electrodes.

1 26. The system of claim 25, wherein the electrodes have a width of at least
2 20 mm and a length of less than 8 mm.

1 27. The system of claim 24, wherein the at least one energy delivery
2 element comprises a distal or proximal pair of electrodes on the probe body.

1 28. The system of claim 24, wherein the at least one energy delivery
2 element comprises a pair of elongated electrodes.

1 29. The system of claim 23, wherein the at least one energy delivery
2 element comprises a plurality of tissue-penetrating elements.

1 30. The system of claim 29, wherein the tissue-penetrating elements
2 comprise needle electrodes, blade electrodes, planar electrodes, C shaped electrodes,
3 corkscrew shaped electrodes, or tissue-penetrating electrode tips.

- 1 31. The system of claim 29, wherein the tissue-penetrating elements
2 comprise an array of two to twenty tissue-penetrating electrodes.
- 1 32. The system of claim 29, wherein the tissue-penetrating elements
2 extend from a tissue-engaging surface by a distance within a range from about 0 to about 8
3 mm.
- 1 33. The system of claim 29, wherein the tissue-penetrating elements have a
2 diameter in a range from about 0.035 inch to about 0.125 inch.
- 1 34. The system of claim 29, wherein proximal portions of the tissue-
2 penetrating elements are electrically insulated.
- 1 35. The system of claim 29, wherein the tissue-penetrating elements
2 comprise expandable electrodes.
- 1 36. The system of claim 23, further comprising a guide body disposable
2 within a urethra so as to register a position of the treatment volume along an axis of the
3 urethra.
- 1 37. The system of claim 36, wherein the guide body further comprises
2 axial position indicators or electromagnetic transmitters.
- 1 38. The system of claim 23, wherein the treatment volume comprises
2 tissue separated from the aligned probe body by a distance within a range of about 2 to 8 mm.
- 1 39. The system of claim 23, wherein the treatment volume is separated
2 from a urethra by at least about 1 cm.
- 1 40. The system of claim 39, wherein the treatment volume is offset
2 laterally from the urethra to a right side or left side.
- 1 41. The system of claim 23, wherein the treatment volume has a length
2 orientation extending along a urethra, a depth orientation extending between the collagenous
3 tissue and the probe body, and a width that is greater than the length of the treatment volume.

1 42. The system of claim 23, wherein the treatment volume has a length
2 orientation extending along a urethra, a depth orientation extending between the collagenous
3 tissue and the probe body, and a width that is less than the length of the treatment volume.

1 43. The system of claim 23, wherein the treatment volume comprises
2 between about 300 cubic millimeters and about 800 cubic millimeters of collagenous tissue.

1 44. The system of claim 23, wherein the at least one energy delivery
2 element heats the treatment volume of tissue by the application of bipolar radio frequency
3 energy.

1 45. A method for treating incontinence, the method comprising:
2 aligning a probe body with a collagenous pelvic tissue;
3 advancing a plurality of tissue-penetrating electrodes into the collagenous
4 tissue from the aligned probe body; and
5 heating a treatment volume of at least 300 cubic millimeters of the collagenous
6 tissue using the aligned probe, wherein the heating is performed so that the treatment volume
7 is heated to a temperature of at least 70°C for a time of at least 30 seconds.

1 46. A system for treating incontinence of a patient having a collagenous
2 pelvic tissue, the system comprising:
3 a probe body alignable with the collagenous pelvic tissue;
4 a plurality of tissue-penetrating electrodes supported by the probe body, the
5 electrodes capable of heating, from the aligned probe body, a treatment volume of at least
6 300 cubic millimeters of the collagenous tissue to a temperature of at least 70°C for a time of
7 at least 30 seconds so that the collagenous pelvic tissue contributes to continence.

1 47. The system of claim 46, further comprising at least one cooling
2 element supported by the probe body so as to provide cooling of intermediate tissue while
3 heating the treatment volume.